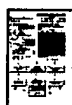




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JP11012051A2: BONDING MATERIAL

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Country: **JP Japan**

Kind:

Inventor(s): **TANAKA ATSUSHI**

Applicant(s): **KYOCERA CORP**
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Issued/Filed Dates: **Jan. 19, 1999 / June 19, 1997**

Application Number: **JP1997000162829**

IPC Class: **C04B 37/02; B23K 35/30;**

Abstract: **Problem to be solved:** To obtain a bonding material capable of strongly bonding a ceramic member to a metal member comprising copper by including one or more kinds of metals selected from silver, tin, copper, titanium, zirconium and hafnium in a specific weight ratio.
Solution: This bonding material for bonding ceramic members to metal members comprising copper comprises 45-95 wt.% of silver, 1-10 wt.% of one or more kinds of metals selected from titanium, zirconium and hafnium, 0.1-50 wt.% of tin and the remainder of copper. When the ceramic member is bonded to the metal member, one or more kinds of the metals selected from titanium, zirconium and hafnium are diffused in the ceramic member to strongly bond the bonding material to the ceramic member, and the tin improves the wettability of the silver and the copper to the metal member. Thereby, the ceramic member and the metal member comprising the copper can strongly be bonded to each other through the bonding material. The ceramic member can be strongly bonded not only to oxide-based ceramic members such as aluminum oxide sintered products but also to nitride-based ceramics and carbide-based ceramics.
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Other Abstract Info: **CHEMABS 130(11)142732S CHEMABS 130(11)142732S DERABS C1999-148375 DERABS C1999-148375**

Foreign References: **(No patents reference this one)**



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